

## ABSTRACT OF THE INVENTION

A system and protocol for enabling bi-directional HTTP-based reliable messaging through a Web proxy server via the Internet is presented. The client processor residing on the private computer network side of the Web proxy establishes two virtual channels with a server. One of the channels is used for outgoing messages from the client to the server, and message delivery acknowledgments. The other channel is used for incoming messages from the server to the client, and message delivery acknowledgments. This incoming channel is established and maintained by the client through the Web proxy server so that the client has full control over the channel. The establishment is accomplished by the transmission of an HTTP-based "request" to the server. The server does not respond until and unless it has a message to be transmitted to the client. Once such a message is generated, the server generates an HTTP-based "reply" to this request, and transmits it to the client via the Web proxy server. The client then sends another HTTP-based request to the server with the message acknowledgment included therein.

The client may request that the server reply to the request after some period of time to allow the client to assess the health of the connection and avoid connection time out disconnections by the Web proxy server. This period may be fixed or may be dynamically adjusted.

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